



MARSHALL STAR

Serving the Marshall Space Flight Center Community

Sept. 16, 2010

Marshall at 50: Honoring a half-century of achievement



On Sept. 8, 1,129 Marshall Space Flight Center team members and retirees marked the Marshall Center's 50th anniversary in striking manner outside Activities Building 4316, as photographed from an aerial boom crane. Hundreds more – along with federal, state and local elected officials from Alabama,

local civic leaders and other special guests – joined in additional anniversary activities. The Marshall Center was dedicated exactly 50 years earlier, on Sept. 8, 1960, in ceremonies led by President Dwight D. Eisenhower. Please turn to page 2 for more images.

James Webb Space Telescope Cryogenic Mirror Test Facility receives gold

By Kim Newton

A bit of gold made its way into the Rocket City on Aug. 30 in the form of a gold-coated James Webb Space Telescope primary mirror segment. It is the first primary mirror segment to achieve the final step in the manufacturing process, prior to undergoing cryogenic testing in the X-ray & Cryogenic Facility at the Marshall Space Flight Center.

The mirror segment, an engineering development unit and flight spare, has been coated with an ultra-thin layer of gold to ensure that infrared light is properly reflected from the primary mirror into the observatory's science instruments. The primary mirror engineering development unit will be closely followed by the other 18 primary mirror flight segments in the coating process.

During cryogenic testing, the mirrors are subjected to extreme temperatures dipping to -415 degrees Fahrenheit, which permits NASA contractor engineers to measure in extreme detail how the shape of the mirror changes as it cools – just as each mirror will change shape over a range of operational temperatures in space. The cryogenic test series helps NASA predict how

See **Gold** on page 3

Marshall at 50: Honoring a half-century of achievement

To honor "The Work of Generations" that has ensured the Marshall Space Flight Center's place in history, the center unveiled a new historic marker – recognizing its formation in 1960 – and held a commemorative event Sept. 8 for civil service employees, contractors and retirees. The event was held 50

years to the day after President Dwight Eisenhower formally dedicated the Marshall Center on Sept. 8, 1960. Further honoring Marshall's rich legacy of achievement, the cities of Huntsville and Madison and the Madison County Commission jointly proclaimed Sept. 8 "Marshall Space Flight Center Day."

On Sept. 8, Marshall Center Director Robert Lightfoot, right, and Charles Winters, executive vice president of the Huntsville/Madison County Convention & Visitors Bureau, unveil an Alabama historic marker commemorating Marshall's formation. The marker, erected at the Redstone Arsenal Visitor's Center at Gate 9, is part of the Alabama Department of Tourism's "Year of Small Towns and Downtowns" program, celebrating the communities, institutions and events that have shaped the state's culture and heritage.



Marshall Center Deputy Director Gene Goldman, right, and Ann Lawson, executive support assistant to the deputy director, serve 50th anniversary cake during the afternoon employee event marking the anniversary in Activities Building 4316. Team members and retirees, cooling themselves with commemorative cardboard fans, circulated through the building to enjoy refreshments provided by the NASA Exchange, watch new Marshall videos about the center's half-century of achievements and browse exhibits marking each decade of the center's history. An estimated 2,000 people participated in the event, organizers said.

Event participants watch videotaped greetings from the current International Space Station crew, including, on screen from left, Shannon Walker, Tracy Caldwell Dyson and Doug Wheelock. They also mingled with special guests, including NASA space shuttle pilots Dominic Antonelli, at far left, and Jim Halsell, second from left. Antonelli piloted shuttle missions in 2009 and 2010. Halsell piloted missions in 1994 and 1995 and commanded three missions in 1997 and 2000. Other guests included veteran astronaut Owen Garriott, who flew on Skylab in 1973 and Spacelab-1 in 1983; and Bonnie Holmes, former executive secretary to Dr. Wernher von Braun, the Marshall Center's first director and leader of the development team that launched America's first space rockets.



well the telescope will image infrared sources in those conditions.

The facility at Marshall is the world's largest X-ray telescope test facility and a unique site for cryogenic, clean-room optical testing.

Northrop Grumman in Redondo Beach, Calif., is the prime contractor for the Webb telescope, leading a design and development team under contract to the Goddard Space Flight Center in Greenbelt, Md. Ball Aerospace of Boulder, Colo., is responsible for mirror testing.

The James Webb Space Telescope is NASA's next-generation space observatory and successor to the Hubble Space Telescope. The most powerful space telescope ever built, Webb will observe the most distant objects in the universe, provide images of the very first galaxies ever formed and help identify unexplored



Ball Aerospace optical technician Scott Murray inspects six primary mirror segments, critical elements of the James Webb Space Telescope, prior to cryogenic testing in the X-ray & Cryogenic Facility at the Marshall Center.

planets around distant stars. Scheduled for launch in 2014, the Webb telescope is a joint project of NASA, the European Space Agency and the Canadian Space Agency.

Newton is a public affairs officer in the Office of Strategic Analysis & Communications.

NASA chief technology officer for IT to speak at Marshall Association meeting Sept. 22

The Marshall Association will host a luncheon at the Redstone Officers' and Civilians' Club in Building 130 on Golf Course Road on Sept. 22. Chris Kemp, NASA's chief technology officer for information technology, will be the guest speaker.

The meeting will begin at 11 a.m. Lunch will be \$13 for Marshall Association members and \$15 for nonmembers. Those planning to attend should

contact Angie Williams at angie.williams-1@nasa.gov by Sept. 17. Any cancellations after that date or no-shows will be expected to pay.

During the luncheon, elections for the 2011 Marshall Association officers also will be held. Visit Inside Marshall for the meeting agenda.

For those interested in joining the association, a \$25 membership fee can be paid at the door. Membership is open to the entire Marshall community. For more information about the association, visit http://inside.msfc.nasa.gov/marshall_association/.



Chris Kemp

'Focus on Marshall' features external tank nose cones, world's largest milling tool

By Lori Meggs

From the tip of the external tank that reaches orbit first, to a tool with an unlimited range of motion, learn about unique manufacturing capabilities on the September episode of "Focus on Marshall," the Marshall Space Flight Center's video program.

Viewers will go inside the Multipurpose Machining Center in Building 4705, to see the world's largest seven-axis milling tool, used to cut and shape massive and complex developmental hardware. Most machines of this type only move in three- or five-axis. Viewers will learn how this state-of-the-art, high-performance tool moves in seven-axis

— allowing an almost unlimited range of motion for drilling precise holes, cutting designs and smoothing or finishing metal parts of all shapes and sizes.

Also spotlighted is a tried-and-true Marshall capability — space shuttle external tank nose cone manufacturing. At Marshall's National Center for Advanced Manufacturing, or NCAM, in Building 4707, Lockheed Martin workers have been producing the external tank structural components since 1997. Viewers will learn more about this unique process, including how patterns are precisely cut and cured in a 9-foot-diameter oven, or autoclave which applies heat and pressure in a controlled environment.

"Focus on Marshall" airs on Marshall TV Sept. 16, 28 and 30 at 11 a.m., noon and 1 p.m. The series also is available each month on NASA TV, Inside Marshall and on the NASA Portal.

Meggs, an AI Signal Research Inc. employee, supports the Office of Strategic Analysis & Communications.

Shuttle Discovery readied for its last mission

Space shuttle Discovery rolls on a 36-wheeled transport trailer from its processing hangar to the Vehicle Assembly Building at NASA's Kennedy Space Center, Fla., Sept. 9, where it will be joined to its solid rocket boosters and external tank.

The trip typically requires 150 workers and about a half-hour to complete, but NASA parked Discovery outside its hangar for several hours to allow hundreds of Kennedy workers to pose with the orbiter one last time.

Later this month, Discovery is scheduled to roll out to Launch Pad 39A for its STS-133 mission to the International Space Station.

The targeted liftoff date is Nov. 1. It will be the shuttle program's 133rd flight and the 39th and final voyage of Discovery before NASA's oldest shuttle is retired.



Team Redstone cyclists town hall meeting to be held Sept. 22



The Team Redstone cyclists town hall meeting will be at noon, Sept. 22, at the Marshall Space Flight Center Activities Building 4316. All cyclists with access to Redstone Arsenal are encouraged to attend.

During the meeting, bylaws for a new club will be presented and approved. Membership will be free. To submit a club name and/or a logo, send entries by Sept. 20 to Janie Miernik at janie.h.miernik@nasa.gov. The winning name and logo will be announced at the meeting, and prizes will be awarded.

For more information, visit Inside Marshall or contact Miernik at 544-6534. Free lunch will be served at the meeting.

Lunar Quest Program to host first International Observe the Moon Night on Sept. 18

The Lunar Quest Program at the Marshall Space Flight Center is hosting the first International Observe the Moon Night from 5 to 8 p.m., Sept. 18, at NASA's Educator Training Facility at the U.S. Space & Rocket Center. The

event seeks to engage the public in lunar observations campaigns that share the excitement of lunar science and exploration.

For more information, visit Inside Marshall.

Classified Ads

To submit a classified ad to the Marshall Star, go to Inside Marshall, to "Employee Resources," and click on "Marshall Star Ad Form."

Ads are limited to 15 words, including contact numbers. No sales pitches. Deadline for the next issue, Sept. 23, is 4:30 p.m. Thursday, Sept. 16.

Miscellaneous

Weimaraner puppies, AKC, silver, shots, ready 9/8, \$350. 256-347-2097 or 256-287-2488

Yorkies, CKC registered, 3 boys, 2 girls, home raised, ready 9/23, \$350-450. 256-425-8381

John Deere front reel mower, high speed reel, Kawasaki air cooled, \$300. 253-208-2926 or 256-353-0370

Murray 42-inch riding mower, 17.5 horsepower, new battery, manual, \$350. 256-655-6348

Double mattress, box springs, less than 1 year old, \$125. 256-655-8370

Contemporary oak bedroom suite, includes dresser, chest, king-size bookcase headboard. 256-489-8031

Round oak table, 4 chairs, \$175; 3 maple bookcases, separate or combined, \$75. 256-885-2535

White/cream colored queen anne sofa, \$600 obo. 256-722-5282 or 256-656-8297

Nord Electro 2 Sixty One keyboard, pedal, power cable, case included, \$1,000. 256-694-2363

Yamaha Oboe M211, resin body, 1 reed, case, inspected by Southeastern, \$300. 256-508-1558

Wilson Grand Slam tennis balls, number WRT1043, all court felt, unopened 8-pack, \$28. 256-828-1234

Truck toolbox, single-lid crossover deep model, fits Chevy classic and other full size, \$220. 256-880-6544

Vehicles

2007 Toyota 4Runner SR5, black with leather, sunroof, 72k miles, \$20,000. 256-679-0485

2003 Porsche 911 Carrera, silver/black, electric seats/doors/sunroof, 47k miles, \$30,000. 256-527-7406

2002 Volvo S60, white/tan, all maintenance records, new Michelins, non-smoker, 87k miles. 256-880-3737

2002 Hyundai Elantra, gold, all maintenance records, 101k miles, \$2,995. 256-851-7406

1998 GMC Pickup, LWB, white, 184k miles, \$4,500. 256-468-9377

1998 Ford Windstar GL, tan, auto, AC, 3.8 V6 engine, 118k miles, \$3,500. 256-617-9614

1998 Stingray RS180 Bowrider, seats seven, bimini covers, fish/ski, new 140 I/O, \$9,500. 256-640-6427

Wanted

Students interested in obtaining beginner to advanced scuba diver certification. 256-651-9909

School quality flute, clarinet, Verizon-compatible cellphone, self-propelled lawnmower, medium dog crate. 256-682-1083

Firewood wanted, delivered to Scottsboro/Guntersville area. 256-714-4651

Houses/offices to clean, available evenings and weekends. 256-777-8595, leave message

Free

Well seasoned firewood, you haul. 256-759-0733

Shuttle Buddies to meet Sept. 27

The Shuttle Buddies will meet at 8:30 a.m. Sept. 27 at Mullins Restaurant on Andrew Jackson Way. For more information, call Deemer Self at 881-7757.



When you wish upon the stars...

Eight-year-old Chris Baldwin Jr., left, shows off the flight jacket – replete with shuttle-flown mission patches – presented to him by Whitney Norwood, a payload communicator in the Marshall Space Flight Center's Payload Operations Center. Chris, who has cancer, is the son of Christopher Baldwin Sr. and Jamie Scarlato of Maryland. He and his parents visited Marshall last month –

part of his Make-a-Wish Foundation visit to the Rocket City. The Marshall team made his trip unforgettable, taking him on guided tours of the Dynamic Test Stand, the Propulsion Research Development Laboratory and other facilities, and presenting him with his own flight suit and scale models of the Ares rockets. Chris met five-time space shuttle astronaut Jim Halsell, sat behind the desk of Marshall Center Director Robert Lightfoot and, from

the Payload Operations Center, talked live with the crew of the International Space Station. John Sweeney, director of the Alabama Make-a-Wish Foundation, worked with Linda Gomez, external relations specialist in Marshall's Office of Strategic Analysis & Communications, to make the visit possible. For information about the Make-a-Wish Foundation, visit <http://www.wish.org>.

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